CHEMOKINES AND METHODS FOR INDUCING THE DIFFERENTIATION OF FIBROBLASTS TO MYOFIBROBLASTS

ABSTRACT OF THE DISCLOSURE

This invention is based on the discovery that chemokines induce fibroblasts to differentiate to myofibroblasts, which play a critical role in wound healing and are implicated in a number of fibrotic diseases. This activity has been localized to a peptide in the N-terminus of several chemokines. Accordingly, the invention provides polypeptides that induce the differentiation of fibroblasts to myofibroblasts *in vitro* and *in vivo*, nucleic acids encoding such polypeptides and related vectors, host cells, and composition containing these components. The invention also encompasses methods for inducing or inhibiting differentiation of fibroblasts to myofibroblasts, *in vivo* as well as *in vitro*, and screening methods for identifying other agents that modulate myofibroblast differentiation.